NOTE XVIII.

A LIST OF THE BORNEAN CICINDELIDAE

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I publish in the following lines not only a list of all the Cicindelidae that are represented in the Sarawak Museum, but notes on their living are added as far as I have caught these beetles, and by the kindness of Dr. WALTHER HORN, of Berlin, I am enabled to give the names of all other species of this family as far as they are known till now from our island. The species mentioned without exact localities are missing in our collections.

I. Gen. TRICONDYLA.

1. *Tr. cyanea* Dej. subsp. *wallacei* Thoms.
   Not rare in Sarawak. Localities: Labuan, Lawas, Marapok Mts., Trusan, Balangean, Kuching, Pangga, Pangkalen Ampat. From May to October (Sar. Mus.); Bidi, December (coll. C. J. BROOKS).
2. — subsp. *brunnea* Dokht.
3. — subsp. *paradoxa* W. Horn.
   A single example from Kuching.
4. *Tr. cyanipes* Eschtz. subsp. *beccarii* Gestro.
   Evidently a mountain form. Sarawak-specimens from Marapok Mts., Trusan, Mt. Penrissen (4500'), Mt. Matang (2800'). Taken in February, May, September, December. Mr. BROOKS records it from the summit of Mt. Santubong (2400') in October.

5. — subsp. *cavifrons* Schaum (= *doriae* Gestro).
Apparently the low-land form. Sarawak-examples all from Kuching. Taken in January, February, May, July, December.

II. Gen. COLLYRIS.

6. *C. mniszechi* Chaud. subsp. *robusta* Dohrn.
Only 2 specimens in the Sarawak Museum, one from Lawas (September), the other from Mt. Matang (July).
7. *C. brevilabris* W. Horn.
8. — subsp. *weyersi* W. Horn.
A single specimen from Kuching (July).
9. *C. antennalis* W. Horn.
10. *C. linearis* Chaud. subsp. *tenuicornis* Chaud.
11. — subsp. *xanthoscelis* Chaud.
12. *C. chloroptera* Chaud.
13. *C. diardi* Latr.
Fairly common. Localities: Marapok Mts., Kuching, Matang, Pangkalen Ampat. From July to January.
14. — subsp. *dolens* Chaud.
Fairly common. Localities: Trusan, Kuching, Mt. Matang (440'). May, July, August, November, December.
15. *C. elongata* Chaud.
Localities: Mt. Matang, Kuching. February, August.
16. *C. labiomaculata* W. Horn.
17. *C. clavipalpis* W. Horn.
18. *C. dimidiata* Chaud.
19. *C. bonelli* Guér. (= *ortygia* Buq.).
20. *C. cruentata* Schm. Goeb.
21. *C. emarginata* Dej.
A common species. Localities: Lawas, Trusan, Kuching, Pangga, Pangkalen Ampat (Sar. Mus.); Bidi (coll. C. J. Brooks). Taken all the year round.
Mr. R. Shelford published an interesting account on the larva of this species in Trans. Ent. Soc. London, 1907, p. 83.

22. *C. rhodopus* Bat.
23. *C. apicalis* Chaud.

Localities: Kuching and Lundu. June, September, November.

24. — **var. *rufothoracica*** (NOV. VAR.).

A single specimen from Quop (Sar. Mus.: October) and one from Kuching (coll. W. HORN: March) are the types of this interesting variety, that differs from *C. apicalis* Chaud. by the red prothorax. The apex of the elytra is dark metallic.

25. *C. fleutiauxi* W. Horn.
26. *C. waterhousei* Chaud.
27. *C. sarawakensis* Thoms.

A common species. I have noticed, how difficult it is to detect it on the small twigs which it frequents. When disturbed it often drops to the ground and is then usually lost altogether. Localities: Trusan, Mt. Saribau, Mt. Matang (3160'), Kuching and Santubong (Sar. Mus.); Bau and Singghi (coll. C. J. BROOKS). From May to December.

28. *C. constricticollis* W. Horn.

Two examples from Marapok Mts. September.

29. *C. levigata* W. Horn.
30. *C. richteri* W. Horn.
31. *C. lissodera* Chaud.

Two examples from Kuching and Bidi. August, September.

32. *C. leucodactyla* Chaud.

III. Gen. DILATOTARSA Dokht.

33. *D. tricondyloides* Gestro.

Only 2 specimens in the Sarawak Museum; from Mt. Matang and Bidi.

IV. Gen. THERATES.

34. *?Th. fasciatus* F.

The only specimen known to Dr. WALTHER HORN

with the locality "Borneo", must let doubtful, if this species really occurs in the island.

35. *Th. spinipennis* Latr. var. *versicolor* Bat.

36. *Th. dimidiatus* Dej. var. *dejeani* Chaud.

One of the commonest Cicindelidae in Sarawak. Localities: Lawas, Mt. Saribau, Mt. Penrissen (3200'), Buri, Kuching, Lundu.

37. — var. *schaumi* Chaud.

A North Bornean form. Eleven specimens in the Sarawak Museum from Lawas and Trusan.

38. — var. *wallacei* Thoms.

39. — var. *punctipennis* Bat.

40. *Th. maindroni* W. Horn.

41. *Th. batesi* Thoms.

A mountain species. Localities: Trusan, Mt. Penrissen (3200'), Mt. Matang, Mt. Lingga (Sar. Mus.); Bidi (coll. C. J. Brooks).

42. *Th. erinys* Bat.

A mountain species. Localities: Mt. Penrissen and Mt. Matang.

43. — **var. *tepa*** (nov. var.).

Three examples from Marapok Mts. taken in September (Sar. Mus. and coll. W. Horn). Differs from the typical form in the colour of the elytra, which are yellow all over, with a slight reddish-purple hue; the medial and apical yellow spot — so prominent in typical *erinys* — are rarely distinguishable, being deeply tinged with the general yellow colour, which extends to the base of the elytra. Colouring of antennae, head, pronotum, legs and underside is the same as in the typical form.

44. — var. *styx* W. Horn.

45. *Th. spectabilis* Schaum.

Kuching and Mt. Matang. Only 3 examples in the Sarawak Museum.

46. — var. *princeps* Bat.

Apparently very local. Marapok Mts., August and

September. I took plenty of this form flying over and alighting on the boulders in the small streams which form the sources of the Lawas River in the Marapok Mts. Its quick flight and procryptic colouring made it extremely hard to see and follow. It is curious that the same effect of invisibility is obtained by *Cicindela crespignyi* Bat., which has similar markings except that a dull grey-green ground-colour takes the place of the glossy black of this *Therates*. I have taken them both in the same locality and have thus had a good opportunity of comparing their respective powers of protection in real life.

47. *Th. schaumianus* W. Horn.

48. *Th. whiteheadi* Bat. (Mt. Kina Balu: WATERSTRADT).

V. Gen. HEPTODONTA.

49. *H. analis* F.

A common species in the neighbourhood of Kuching, occurring from Santubong and Buri on the coast, to Bidi in Upper Sarawak. It has been captured at various altitudes on Mt. Matang, including the summit (3160').

VI. Gen. CICINDELA.

50. *C. catoptroides* W. Horn.

51. *C. filigera* Bat.

Localities: Marapok Mts. and Trusan.

52. *C. longipalpis* W. Horn.

A rare species in Sarawak. One example from the summit of Mt. Matang (3160') and one from Pangkalen Ampat (Sar. Mus.). More common in Java and Sumatra.

53. *C. plasoni* W. Horn.

54. *C. versicolor* Mac Leay.

Not common. Localities: Kuching and neighbourhood, Quop (Sar. Mus.); Bidi (coll. C. J. BROOKS).

55. *C. triguttata* Herbst.

Trusan and Kuching (Sar. Mus.); Singghi (coll. C. J. Brooks).

56. *C. craspedota* Schaum.

57. *C. minuta* Oliv.

I have not seen this species alive. The 8 examples in the Sarawak Museum are taken in 1899—1900.

58. *C. sumatrensis* Herbst.

59. *C. funerea* Mac Leay, subsp. *opigrapha* Dej.

A single specimen from Baram (Sar. Mus.).

60. — subsp. *multinotata* Schaum.

61. *C. discreta* Schaum.

Not common. Localities: Lawas, Baram, Kuching and Quop (Sar. Mus.); Bau and Bidi (coll. C. J. Brooks).

62. *?C. decemguttata* F.

Its existance in the island seems still doubtful.

63. *C. crespignyi* Bat.

Apparently a very local species. Until 1909, there were only 3 examples in the Sarawak Museum, one from Mt. Kina Balu and two from Baram. In August and September of last year I was lucky enough to find a locality for them in the sources of the Lawas River in the Marapok Mts. Here it was fairly abundant, flying with *Therates princeps* Bat. over the rocky beds of small streams and, like many other Cicindelidae, it was always to be found in bright sunshine.

I had concluded that it was restricted to North Borneo, but to my surprise, in November last I again met with it in the upper waters of the Sarawak River, at a place called Danau, some 50 miles from the sea (as the crow flies). This locality is about 400 miles south-west of Baram, and this insect does not appear to have been captured between the two places!

64. *C. aurulenta* F.

The most common Cicindelid in Sarawak and probably the most common beetle. To be found everywhere flying in the sunshine along sandy paths, in new and old jungle, and in cultivated land.

65. *C. velata* Bat.
66. *C. fuliginosa* Dej.
67. *C. tenuipes* Dej. and its ab. *araneipes* Schaum.

Very common on the coast at the mouth of the Sarawak River. When flying over dry sand it is very hard to see, but its light colouring makes it fairly conspicuous when flying over wet sand and thus easy to catch. Frequents the debris left by the sea at high tide.

68. *C. hewitti* W. Horn.

A rare species from Buntal (Sar. Mus.) and Sungei Sabandi (coll. Rev. G. Dexter Allen). Named after Mr. John Hewitt, formerly Curator of the Sarawak Museum.

69. *C. alleni* W. Horn. (Records of the Indian Museum, II, 1908, p. 409).

Only known from a small river (Sungei Mirah) near Betong on the Batang Lupar. Discovered by the Rev. G. Dexter Allen, after whom the species is named.

70. *C. doriae* Gestro.
71. *C. spinicollis* W. Horn.

A single specimen from Buntal (Sar. Mus., 11-8-09).

This list will surely very fast still increase a good deal, especially the following 3 species, not noted yet from Borneo, shall, in all probability, prove to occur in the island: *Cicindela foveolata* Schaum, *funerea* Mac Leay and *striolata* Ill.

Sarawak, 17 February 1910.